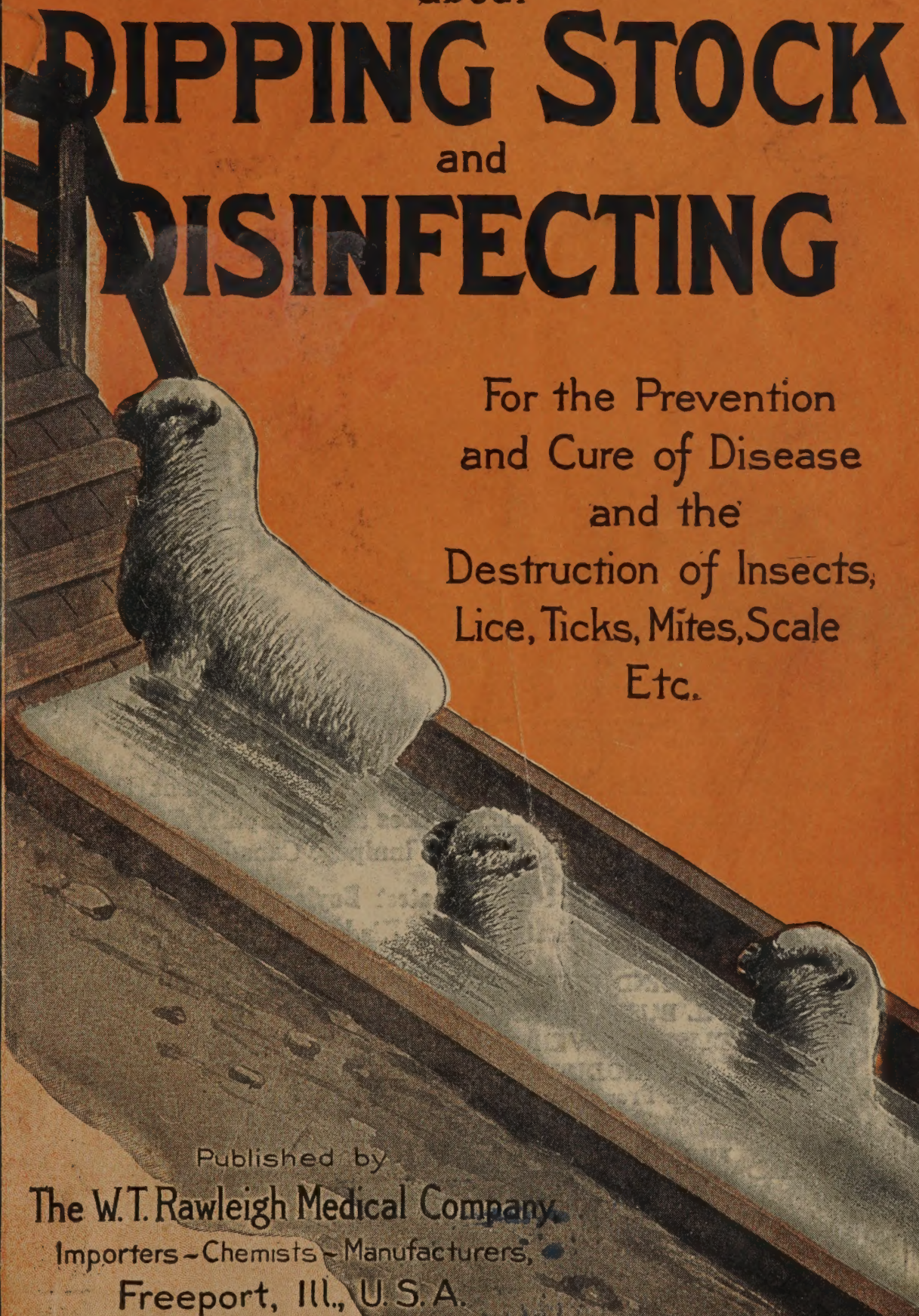


Reliable, Scientific, Practical Information
about

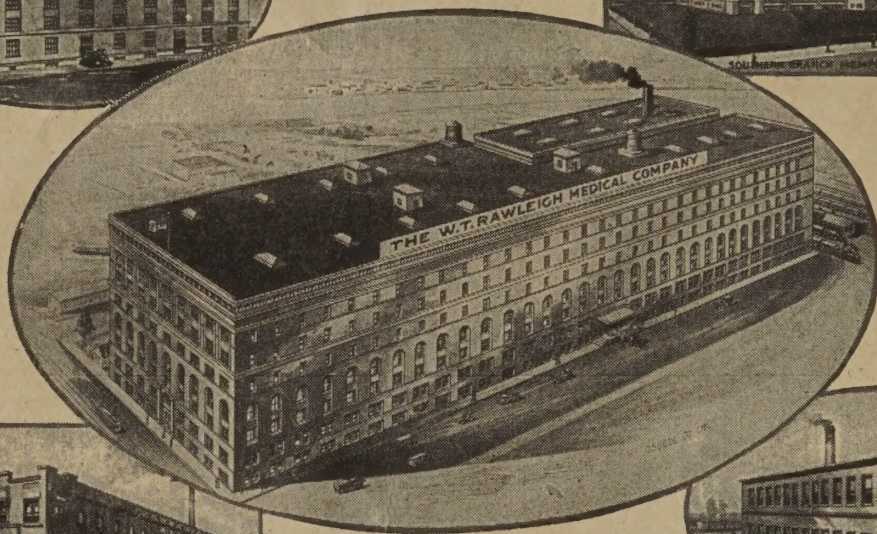
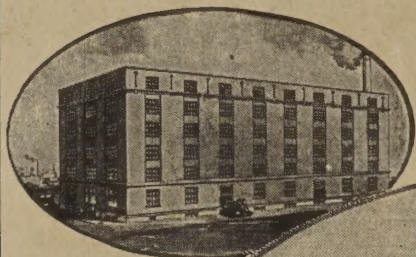
DIPPING STOCK and DISINFECTING

For the Prevention
and Cure of Disease
and the
Destruction of Insects,
Lice, Ticks, Mites, Scale
Etc.

An illustration showing three sheep in a dipping tank. One sheep is at the top of the tank, another is in the middle, and a third is at the bottom. The tank is made of wooden planks and has a ramp leading up to it. The sheep are depicted in a realistic, detailed style.

Published by
The W. T. Rawleigh Medical Company.
Importers - Chemists - Manufacturers,
Freeport, Ill., U. S. A.

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The W. T. Rawleigh Medical Company

Importers - Chemists - Manufacturers

Freeport, Ill., U. S. A.

From Manufacturer to Consumer The Fastest Growing and Most Successful Company

To Farmers, Stockraisers And Poultrymen

GREETING:

At the beginning of our 17th business year we take pleasure in presenting you this new book, which explains the importance and advantages of dipping stock and disinfecting. It has been prepared at a large expense and contains, we think, more reliable, practical information on these important subjects than was ever before furnished for free distribution. It will be distributed into the homes of about two million old and new customers, most of whom have been using the products of our laboratories for many years with the most satisfactory results.



Of all the old, time-tested, satisfying, result-producing articles in our large line of preparations, there is nothing more useful on the farm or that has gained more rapidly in popularity than Rawleigh's Stock Dip & Disinfectant, until now most of our customers regard it as an absolute necessity.

We therefore take pleasure in dedicating this most useful and valuable book to the best friends we have in the world—the American Farmer, Stockraiser, and Poultryman. We hope it will be of great benefit to all into whose hands it will be placed and that it will be carefully preserved and frequently referred to.

Yours very sincerely,

W. T. RAWLEIGH,

President

Prevention vs. Cure

Some Startling Facts About Preventable Loss of Life

GOVERNMENT mortality statistics show that in this country every 50 seconds a human life is lost from preventable causes. Every year lives equal in number to the population of the state of North Dakota reach an untimely end. At the present death rate, over six million American lives will be needlessly lost during the next 10 years from preventable diseases. An eminent authority on this subject says that the science of disease prevention, if properly applied, can add 15 years to the present average length of human life.

These startling figures give some idea of the enormous, constant and unnecessary waste of human life. This being true of the human family, considering that a human life is far more precious than that of an animal, therefore more carefully protected, how much more true must it be respecting the sacrifice of life among domestic animals.

Farm Animals Representing Millions of Dollars Lost Annually Through Preventable Causes

From preventable causes—through ignorance and neglect—tens of thousands of animals are lost every year in this country. Parasites such as lice, ticks, mites, etc and diseases such as hog cholera, tuberculosis, etc., make their inroads on every farm. This means an annual loss of millions of dollars to the farmer and stock raisers of America.

To illustrate with what inconceivable rapidity these infectious diseases of animals will spread it is estimated that if left unmolested for 90 days a pair of scab mites will produce 1,500,000 of their kind. Nearly every farmer knows with what disastrous rapidity hog cholera will do its deadly work.

So great a menace to the live stock industry have these parasites and infectious diseases become that it has been necessary to pass laws regarding them and at times quarantine whole sections of country as a means of preventing further spread of disease.

State experiment stations and agricultural colleges have given this matter of parasites and preventable diseases among animals a great deal of attention and as a result much headway has been made. A realization of the importance of preventive measures has been reached but yet by reason of the general lack of information on this subject, losses among stock, due to preventable causes, annually amount to a total sum almost beyond calculation.

Effective, Inexpensive and Easy to Apply

Disinfection

A Simple and Easily Applied Remedy Would Stop Such Losses

Original causes have not been properly understood and combated. The establishment and maintenance of healthful conditions is a subject that has been much neglected, hence prevention of disease has not met with greater success. Progressive farmers, stock raisers and poultrymen generally, however, are now fast recognizing the fact that thorough disinfection and the greatest possible cleanliness are the first and absolutely necessary requirements to the best success in the live stock and poultry industries.

There is no longer any excuse for permitting live stock and poultry to support millions of lice, mites, ticks, etc., or disease to be a constant menace to both human beings and animals when intelligent housing, feeding and disinfection would destroy and prevent these parasites and ward off disease.

The most successful stock raiser or poultryman of today is foresightful. He does not wait until these affections put in their appearance but uses the precautions that will prevent them.

We now know that flies and mosquitoes are not only a nuisance and torment to both human beings and animals but positively dangerous as carriers of deadly diseases. Disinfection, a simple, inexpensive yet very effective means, will, if rightly understood and applied, prevent parasites and infectious diseases and stop the enormous loss of life among live stock with its consequent loss of profit, and at the same time safe-guard the health of human beings.

Many Stock Dips and Disinfectants Upon the Market

While there are many different preparations of this character offered to the public for some of which the most extravagant claims are made, we believe a careful consideration of the facts presented herein will make plain to you that **Rawleigh's Dip & Disinfectant** is both best and cheapest.

Many people think that one dip is about like another—that there is little, if any, choice as to quality. This is a mistake, for no two are alike and some are much better than others.

When we started to make **Rawleigh's Dip & Disinfectant** we went into the subject very exhaustively with the object of making the best preparation of its kind, considered from all points of view, that it was possible to manufacture. When we started to market our Dip, we felt that it was second to none on the market and the splendid satisfaction it has given everywhere and the rapidly increasing sales make us more convinced than ever that this is the case.

Has Over 50 Uses on Every Farm

What Is *Rawleigh's* Dip & Disinfectant

It Is An Inexpensive, Effective, Easily Applied Liquid that kills lice, ticks, mites and other parasites upon domestic animals and yet does not injure the animals in any way. It is a high grade coal tar product, free of gross impurities. It is made in concentrated form to be diluted with water before being applied by the user. It mixes readily with any kind of water, soft water slightly warmed, however, being preferable.

A Powerful Germicide. It destroys bacteria and other disease germs in sick rooms, cellars, stables, hog pens, poultry houses and elsewhere. It is non-carbolic, non-irritating, and non-poisonous when used according to directions. Does not injure fabrics or metals.

An Efficient Disinfectant. Removes foul, rank and disagreeable odors by destroying their causes. Does not merely substitute one odor for another. It destroys odors.

A Purifier and Cleanser. It is a foe to filth and decay. It arrests putrefaction, prevents the hatching of flies and kills bedbugs, cockroaches and other noxious insects.

A Healer. Does not injure the skin in any way. Instead it stimulates healthy activity, promotes the growth of wool on sheep, cleans and glosses the coat on horses, and hastens the healing of cuts and sores.

A Profit Producer. Instead of being an expense it is a splendid investment paying handsome profits. Every living creature on the place thrives better and brings in much greater returns where it is used. You simply cannot afford to get along without it. It is so valuable for so many purposes, costs so little and is so easily applied.

Its Many Uses make Rawleigh's Dip & Disinfectant an absolute necessity on every farm.



Testing Raw Materials

EFFECTIVE, INEXPENSIVE AND EASY TO APPLY

Reasons For Its Superiority

There are many reasons why Rawleigh's Dip and Disinfectant is better than others, but among them there stand out

Three Main Reasons

FIRST: We are determined to make the best. Some manufacturers slight quality in order to add to their profits. We are not satisfied with anything but the highest standard of effectiveness. We constantly strive for it. *That is one reason for superiority.*

SECOND: We make it from the very best **Genuine Imported Creosote Oil**. This oil is very carefully prepared, standardized and guaranteed by the manufacturers to be of uniform high germicidal and insecticidal strength.

This oil we combine with other substances which our **thorough scientific investigations have proven**, will make the most reliable and effective Dip and Disinfectant. Each ingredient is carefully tested before being used. *This is another reason for superiority.*

THIRD: We manufacture from our own processes and formulas which have been thoroughly and carefully worked out for producing the highest grade of Stock Dip. The utmost care is exercised in making each and every batch.

The **Germ and Insect destroying** quality of every batch is **carefully tested** by our chemists and **proven to be superior** before it is packaged ready for shipment. *This is still another reason for superiority.*

Regarding Our Dip Plant

Rawleigh's Stock Dip & Disinfectant is made in a 2 story building, 100 ft. long by 40 ft. wide, with a private side track.

Raw Materials, cans, and shipping cases are all purchased in carload lots. Some of the high grade English Oils used are bought in 7000 gallon capacity tank cars. These are emptied by gravity directly into our great storage tanks. From these tanks the oil is pumped directly into the boilers and heating kettles.

The Equipment consists of many large tanks and kettles for storage, heating and cooling purposes. These tanks hold from 1000 to 10,000 gallons each.

Our Capacity is 45,000 gallons official dipping solution per day, which is sometimes doubled during the busy seasons, by operating the plant night and day.



Testing Finished Products

A Rigid Analytical Test Establishes the Superiority of Rawleigh's Stock Dip & Disinfectant

To still more fully satisfy ourselves and our customers that our Dip has no superior, we recently secured samples of 9 competing preparations and turned them over to our Head Chemist for a comparative analysis and a detailed report.

A most searching investigation and analysis was made in our Analytical Department which is equipped with every facility for doing this work thoroughly.

To substantiate his report, we secured from our Chemist the following sworn statement:

Chemist's Sworn Statement

State of Illinois }
County of Stephenson } ss

W. J. Trevillian, being first duly sworn, deposes and says that between the dates of August 2, 1911 and September 8, 1911 he obtained samples in the open market of 9 different dips, and subjected each one to a thorough chemical analysis, an accurate report of which has been furnished The W. T. Rawleigh Medical Company, and that the facts and figures from said report, published in the table in connection herewith, are correct transcripts from said report.

He further deposes and says that said report is thorough, accurate, and impartial, and sets forth fully the actual chemical condition of each sample analyzed.

(Signed) W. J. TREVILLIAN.

Subscribed and sworn to before me this 28th day of September, A. D., 1911.



F. G. LLEWELLYN,
Notary Public.

My commission expires May 17, 1915

On the opposite page we give the Report in detail as furnished us by our Head Chemist, except that we indicate each Dip by number instead of publishing the name.

This Report Should Have Your Careful Attention

It proves conclusively that most other Dips cost from 25c to \$1.43 more for 100 gallons dipping solution of the same relative strength than if Rawleigh's Dip and Disinfectant is used.

Chemist's Detailed Analysis and Report on 9 Stock Dips

The Accuracy of this Report Supported by Chemist's Sworn Statement

Name of Dip	Dilution Authorized by U. S. Government for official dipping for Sheep Scab	Dilution Recommended by Manufacturers for dipping for Sheep Scab	Price per Gallon	Capacity of Can in Ounces	Contents of Can in Ounces	Specific Gravity	% Water	% Soda	% Pyridin	% Phenols	% Rosin Acids	% Hydro-Carbons	Relative Strength	Cost of 100 gal. Dipping Solution as Authorized by Government	Cost of 100 gal. Dipping Solution as Directed by Manufacturers.
No. 1....	1 to 70	.....	\$1.25	129 $\frac{1}{2}$	112	1.0417	9.67	1.4	2.04	14.54	17.9	54.45	61.58	\$1.76	\$.....
No. 2....	1 to 50	.....	\$1.50	127 $\frac{1}{2}$	97 $\frac{1}{2}$	1.0646	10.33	2.33	.98	12.42	25.12	48.32	64.13	\$2.94	.....
No. 3....	1 to 70	.....	\$1.25	129	122 $\frac{1}{2}$	1.0541	7.37	1.68	1.74	15.83	23.67	49.71	57.49	\$1.76	.....
No. 4....	.....	1 to 50	\$1.25	127	116	1.0507	14.09	2.09	1.02	8.17	23.28	51.35	52.11	.....	\$2.45
No. 5....	.....	1 to 60	\$1.25	131	128	1.0347	13.89	1.51	.83	6.31	17.78	59.68	55.86	.....	\$2.05
No. 6....	.....	1 to 60	\$1.25	61 $\frac{1}{2}$	64	1.0546	5.98	1.87	.62	12.95	20.69	57.89	67.23	.....	\$2.05
No. 7....	1 to 70	.....	\$1.25	65 $\frac{1}{2}$	61	1.0547	14.21	1.97	1.24	13.98	18.98	48.62	63.05	\$1.76	.....
No. 8....	.....	1 to 50	\$1.00	67 $\frac{1}{2}$	64 $\frac{1}{2}$	1.0689	12.87	2.56	.98	11.46	21.79	50.34	60.17	.....	\$1.96
Rawleigh's	1 to 65	.....	\$1.00	129 $\frac{1}{2}$	128 $\frac{1}{2}$	1.0567	10.47	1.98	1.34	14.04	19.28	52.89	69.67	\$1.51	.....

In connection with this report, we wish to explain that the samples of the competing dip were bought in the open market and the sample of **Rawleigh's Stock Dip and Disinfectant** used in this test is one taken from regular stock. In other words, care was exercised that these samples used in the test would be representative of the average standard of quality of the various preparations.

We have in our files the documentary evidence to support this analysis, so can absolutely prove every figure given in the report.

Carefully Manufactured

Always of Uniform Strength and Excellence

This is a Standardized Preparation, that is as it goes through our processes of manufacture it must in all respects conform to a definite high standard of excellence. This means that it is always the same so that a certain dilution will always give the same dipping strength.

This is very important as it does away with all guess work and experimenting and you can feel assured that if you dilute a certain quantity of Rawleigh's Dip & Disinfectant bought today in the same proportion you did the same quantity bought a year ago you will get a dipping solution of the same strength.

As a careful stockraiser you cannot afford to take any chances with an unstandardized preparation as it is likely to cause you trouble and loss.

Government Approval

If they comply with certain regulations laid down by it, the government permits the use of proprietary dips in its official dip-pings. As all know, the government's requirements are strict. It, therefore, takes a good dip to satisfy the regulations governing sheep scab for instance and at the same time stand a high dilution so as to make it an economical preparation to use.

Rawleigh's Dip and Disinfectant stands this test and its use is permitted by the Bureau of Animal Industry for the dipping of scab-by sheep at a dilution of 1 to 65. This information is plainly set forth on the label of every container of our Dip & Disinfectant and gives you assurance that you are buying the best preparation of its kind that can be obtained.

Effects Big Savings

The secret of success in stock raising is to keep an animal in a healthy, vigorous, growing condition from birth to maturity. If this is not accomplished every set-back means a loss to the feeder. The more quickly an animal can be brought to mature growth and in satisfactory condition to market the greater the profit to the raiser.

The most common causes of set-backs are parasites and infectious diseases, animals being particularly subject to attack from these while young and when it is most important that all conditions be such as to promote rapid, healthy growth.



Milch Cows soon run down and become unprofitable if Lice, Ticks, Mites, etc. overrun them.

EFFECTIVE, INEXPENSIVE AND EASY TO APPLY

Rawleigh's Dip & Disinfectant a Necessity on Every Farm

In the minds of the most progressive farmers, stock and poultry men there is no longer any question about the advisability, in fact the absolute necessity, of thorough dipping and disinfection if the best results are to be secured. Bulletins sent out by the Government Department of Agriculture point out the necessity of dipping and disinfection as a preventive of parasites and infectious diseases, and agricultural colleges, state experiment stations and representative farm papers and breeders' journals give the same advice—stock must be dipped, yards, pens, buildings, etc., thoroughly disinfected in order to keep the animals in the most thrifty condition.

Rawleigh's Dip and Disinfectant has over 50 different uses on every average farm. It is also an invaluable preparation upon stock ranches, in livery stables or wherever animals are kept.

Unquestionably, if used properly and at regular intervals, it will greatly increase profits and promote sanitary and healthful surroundings for your live stock, reducing to the minimum your loss from sickness or death through infectious diseases and vermin, so prevalent among animals.

You never know when infectious diseases will break out in your immediate neighborhood and attack your animals, causing the loss of nearly every animal infected. Rawleigh's Dip and Disinfectant is the best and cheapest insurance you can get to prevent this and protect you against such losses.

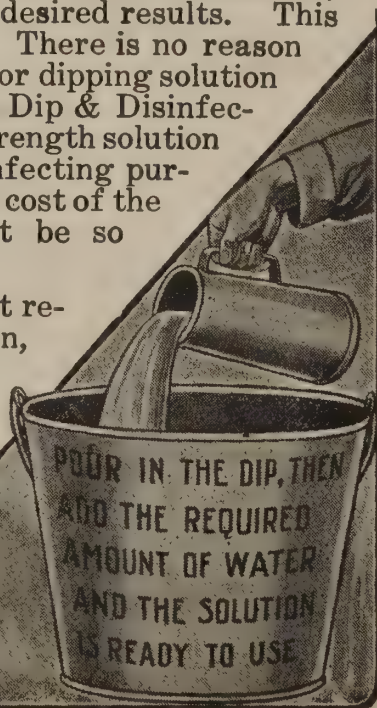
Inexpensive and Easy to Use

Our buying, manufacturing and selling facilities and methods are such that we believe we are perfectly justified in saying that we offer a better and more effective preparation for less money than any other company.

Being stronger and more effective than other like preparations, a smaller quantity is required to produce the desired results. This makes it the cheapest and best for the user. There is no reason why you should pay 3 to 10 cents per gallon for dipping solution of inferior quality when by using Rawleigh's Dip & Disinfectant you can get full required government strength solution at practically 1½ cents per gallon. For disinfecting purposes, killing lice in poultry houses, etc., the cost of the solution per gallon is still less as it need not be so strong as when used as a dip.

While this preparation as a dip gives best results by submerging the animal in the solution, yet if care is exercised it can be applied with almost equal effectiveness by other methods as by the use of a brush, broom, sponge, spray-gun, etc.

**Rawleigh's Dip & Disinfectant is
BEST and CHEAPEST
By Every Test**



Reduce Your Losses And *Increase Your Profits*

By the Use of Rawleigh's Dip & Disinfectant for All Live Stock and Poultry

Used Upon Hogs. It is a remedy for Mange, Eczema, Lice, etc., and a powerful factor in the prevention of Hog Cholera and Swine Plague.

Used Upon Sheep. It is a remedy for Scab, Lice, Ticks, Foot Rot, Maggots and also lessens the prevalence of Grub in the Head.

Used Upon Cattle. It is a remedy for Mange, Spanish Itch, a destroyer of all Lice, Wood Ticks, Ring Worm, Screw Worms, Warbles, Heel Flies and Contagious Abortion.

Used Upon Horses. It is a remedy for Mange, Lice, Ring Worm, Galls, Grease Heel, Scratches, Thrush and Proud Flesh.

Used Upon Fowls and in coops, pens, yards and run-ways. It is a remedy for Lice, Mites, Fleas, Canker, Leukemia, Chicken Pox, Favus, Scaly Leg or Scabies, Scab of the Body and a most reliable preventive of Cholera.

Used Upon Any Kind of Animal. It is a destroyer of Parasites and a healer of Skin Diseases, Galls, Wounds, Insect Bites and Sores of various kinds.

Used About the House, and elsewhere. It is a thorough disinfectant and destroyer of disagreeable odors and insects.

For Personal Use. It is a splendid antiseptic wash for burns, cuts, ivy poison, bee stings, insect bites and other wounds.

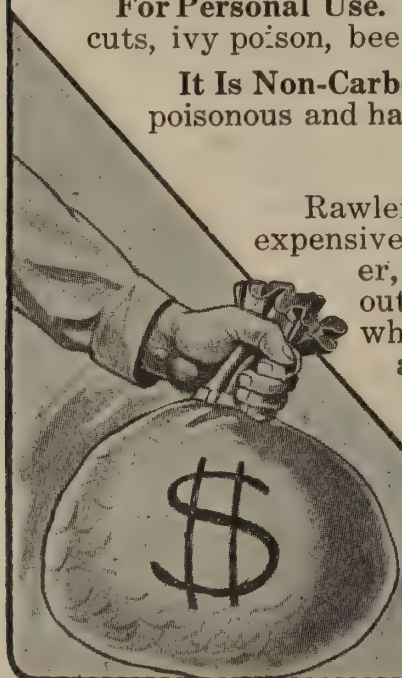
It Is Non-Carbohic and used according to directions is non-poisonous and harmless to man and animals.

It Pays Big Profits

Rawleigh's Dip and Disinfectant is so effective, inexpensive and easy to apply that no up-to-date farmer, stock or poultry man can afford to be without it. There is no longer any question as to whether it pays. In the prevention of disease, and saving of animal life it will oftentimes return its cost hundreds of times over during the year.

You will not only increase your profits but the healthy, thrifty looking animals you will have in consequence of its use will be a constant pride and satisfaction to you.

Every Time You Use RAWLEIGH'S DIP & DISINFECTANT It Effects Big Savings For You



General Instructions for the Use of Rawleigh's Dip and Disinfectant

This preparation is used upon animals chiefly in two ways: either by dipping or immersing them in a diluted solution contained in large tanks or vats, or by applying the solution to the animals with a spray, sprinkler, broom, brush, sponge, etc. The latter is called hand dressing.

To Produce Best Results the solution must, of course, be thoroughly applied to every part of the body and this is best accomplished by a complete submersion of each animal in the dipping solution and wherever possible this method should be followed. If the head does not go under when the animal enters, it should be pushed under just for an instant. If this cannot be done, the solution should be thrown over the head with a bucket.

Large Animals.—It is often inconvenient to dip horses and cattle, because you may have only a few for which it hardly pays to erect a plant. In such cases use hand dressing; or, several farmers in a neighborhood may club together and build a plant at some convenient place where each may take his animals and dip them whenever necessary. Dipping is the better method where at all practicable. Hand dressing is looked upon by the most experienced merely as a substitute for dipping and is employed until such time as dipping can be done.

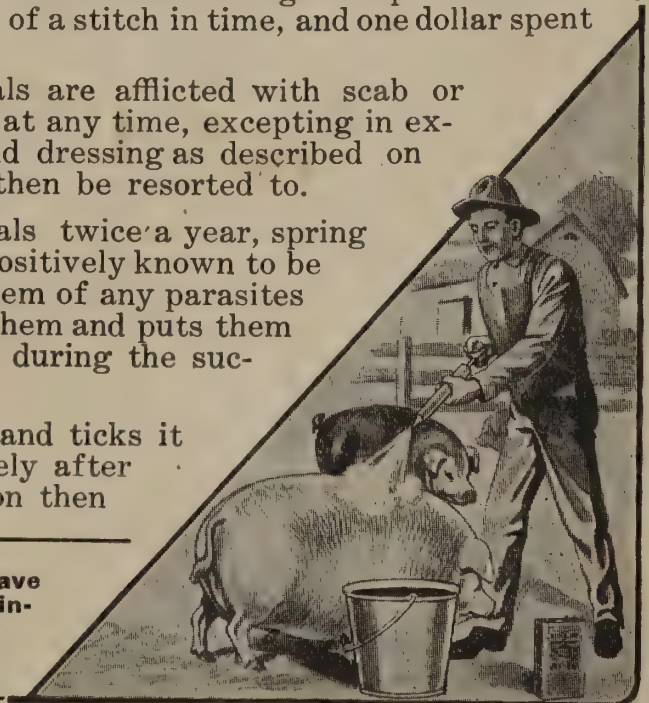
Spending Money.—No man should be afraid to spend a little money in dipping or spraying his animals; he could not spend it to better advantage. When dipping is needed the sooner it is done the better. Why spend money feeding millions of parasites? Even lice weaken live stock, make them nervous and render them less able to withstand contagious diseases. There is no better way of preventing hog cholera, swine plague, fevers, scab, mange and other germ diseases than by the use of Rawleigh's Dip and Disinfectant. It is the old story of a stitch in time, and one dollar spent this way saves hundreds.

When to Dip.—If animals are afflicted with scab or mange, do not hesitate to dip at any time, excepting in extremely cold weather. Hand dressing as described on page 18 of this book should then be resorted to.

It is well to dip all animals twice a year, spring and fall, whether they are positively known to be infested or not. This rids them of any parasites that may happen to be upon them and puts them in better condition to thrive during the succeeding months.

If dipping sheep for lice and ticks it is best to do this immediately after shearing, because the solution then

Actual Tests by our Chemists have proven that Rawleigh's Dip & Disinfectant is cheaper to use than any other Dip on the market.



EFFECTIVE, INEXPENSIVE AND EASY TO APPLY

reaches the skin more easily. All lambs should be dipped also, even though they are not sheared.

Hogs can be dipped every two or three weeks to advantage. In addition to killing lice and other parasites, there is no surer way of preventing cholera among hogs than by dipping them frequently, and keeping pens, yards, etc., thoroughly disinfected all the time with Rawleigh's Dip & Disinfectant.

Pregnant Ewes.—Frequently these cannot be dipped without causing them to abort, and hand dressing is usually better for them. See page 18 of this book.

Pregnant Cows.—These can be dipped without fear of injury, where care is taken to avoid crowding in the chutes.

Always avoid crowding animals of any kind, whether horses, cattle, sheep or hogs, as they are apt to injure each other. Avoid all excitement; gentle methods are better.

Quantity of Fluid Required.—It is practically necessary to determine beforehand how much dipping solution will be required to fill the tank or vat. In order to ascertain this, the capacity of the vat or tank must be estimated.

Referring to Fig. 1 herewith, you will note the tank is 108 inches long on the top, 48 inches long on the bottom, 24 inches wide at the top, 9 inches wide at the bottom and 36 inches deep. To estimate the capacity

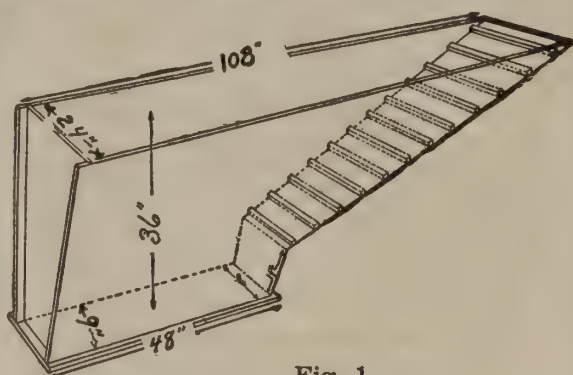
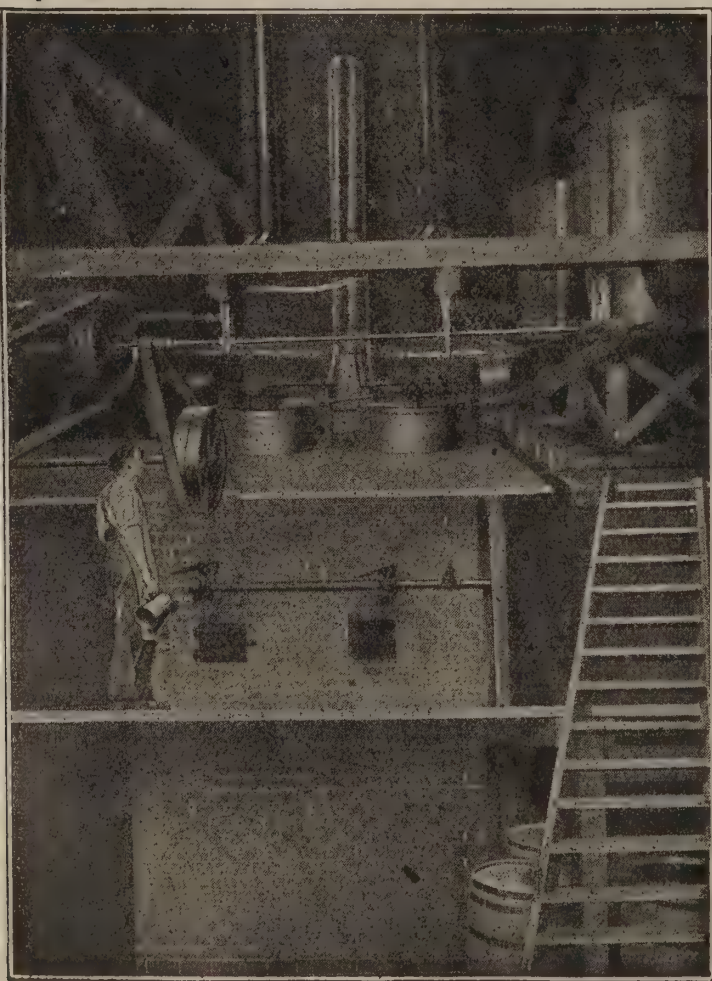


Fig. 1



This picture, made from photograph, shows the large heating boilers, stirring kettles, and tanks used in making Rawleigh's Stock Dip and Disinfectant.

HAS OVER 50 USES ON EVERY FARM

of this tank, it is first necessary to figure its contents in cubic inches, and this is done as follows:

$$108 \div 48 \div 2 = 78$$

$$24 \div 9 \div 2 = 16\frac{1}{2}$$

30 inches equal depth of liquid, and

$$78 \times 16\frac{1}{2} \times 30 = 38610 = \text{capacity in cubic inches.}$$

There are 231 cubic inches in one gallon and therefore, to find the number of gallons required to fill this tank, divide 38610 by 231=167+ or about 168 gallons.

To find how many gallons of Rawleigh's Dip and Disinfectant should be used to make the above quantity of dipping solution, divide the number of gallons the tank will hold by the figure representing the amount of dilution according to the directions; that is, divide by 65, 77, 100, etc.

For Instance: If 168 gallons of dipping solution are required, and you are going to dip sheep for lice, looking in the directions you find that the dipping solution should consist of one part Dip to 77 parts water. Therefore, divide 168 by 77, which gives practically $2\frac{1}{5}$. Therefore, $2\frac{1}{5}$ gallons of Rawleigh's Dip and Disinfectant will be required. Also see following table.

Diluting Table

How to Make Different Strengths of Dipping Solution With Rawleigh's Dip and Disinfectant

To get a 1 to 100 solution	Use 3 tablespoonfuls of Dip & Disinfectant to 1 Gallon of Water " 1 pint " " " 12 " " " " 1 gallon " " " 100 " " "
To get a 1 to 77 solution	Use $\frac{1}{4}$ pint of Dip & Disinfectant to $2\frac{1}{2}$ Gallons of Water " 1 gallon " " " 10 " " " " " " " " 77 " " "
To get a 1 to 65 solution	Use $4\frac{1}{2}$ tablespoonfuls of Dip & Disinfectant to 1 Gallon of Water " 1 pint " " " 8 " " " " 1 gallon " " " 65 " " "
To get a 1 to 50 solution	Use 1 tablespoonful of Dip & Disinfectant to $1\frac{1}{2}$ Pints of Water " 1 pint " " " 6 Gallons " " " " 1 gallon " " " 50 " " "

The above figures are not exact in every case, but accurate enough for practical purposes.

This picture, also made from a photograph, shows where we store 4000 gallons Rawleigh Stock Dip and Disinfectant in cooling tanks at one time. Employes are filling the cans and putting them in cases ready for shipment.

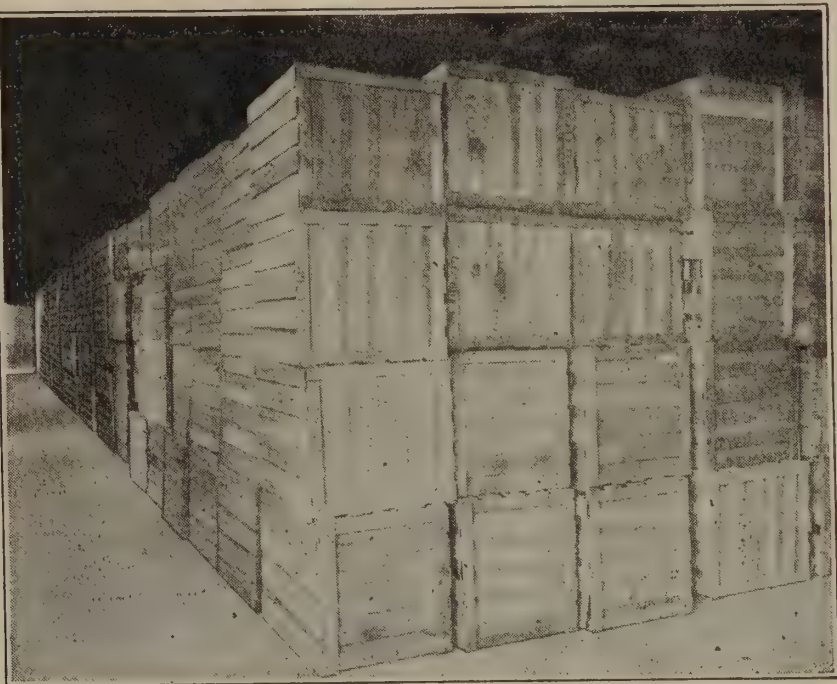


EFFECTIVE, INEXPENSIVE AND EASY TO APPLY

Enough Dipping Solution must always be put into the vat or tank (especially in square ended tank) to prevent the animals' legs being broken by striking the bottom. Enough Dip must always be used to completely immerse the animals in any event, and each animal's head must be pushed under the solution once. Only complete submersion is required, but it must be complete.

Mixing the Dip.—The Dip and the water in which the dipping solution is made should always be thoroughly and evenly mixed. In

order to accomplish this readily, full strength Rawleigh's Dip & Disinfectant should be poured into the bottom of the vat first and then the water thrown in upon it. Where a hose can be used it is better still.



The above picture shows a section of our Dip plant where many carloads of empty cans are stored in cases before they are filled with Rawleigh's Stock Dip & Disinfectant.

old-fashioned cauldron may be used. If preparing a larger batch, it is best to have more extensive apparatus, different forms of which may be purchased. In some places a threshing engine is used to good advantage by taking off the whistle and connecting the engine at this point with the vessel containing the liquid to be heated. Steam is then turned into the liquid from the engine. Never heat above 110 degrees F. 100 degrees is better.

A Second Dipping.—All animals should be dipped a second time within ten days to two weeks after the first dipping, to kill any parasites that may have hatched out in the meantime. Dipping always kills the parasites but never the eggs or nits. Do not let scabby sheep or mangy cattle go without a second dipping longer than ten days.

The Thermometer.—To avoid chilling your live stock, it is important that the dipping solution be of uniform temperature and never very far from 100 to 110 degrees F., and therefore a good thermometer is practically necessary.

The thermometer illustrated herewith is a floating dairy thermometer. It is best to draw samples of the fluid from different parts of the tank, putting them all together into a tub or something of that kind, and then immerse the thermometer in this vessel. If the dipping process lasts very long, it is well to examine the temperature of the solution occasionally so see that it does not fall below the 100 degree mark.

Breaking Hard Water.—Soft water is better for making Dip solution, and when there is no rain water or other natural soft water obtainable, hard water from wells may be softened as follows:

Dissolve 2 heaping tablespoonfuls of washing soda and 1 cake of good laundry soap in 10 quarts of water. Heat may be used to do this if necessary. If hard soap is not at hand, about three times as much soft soap may be used instead. Use the resulting fluid to soften the hard water. One part of this fluid to every 10 parts water will be found sufficient as a rule.



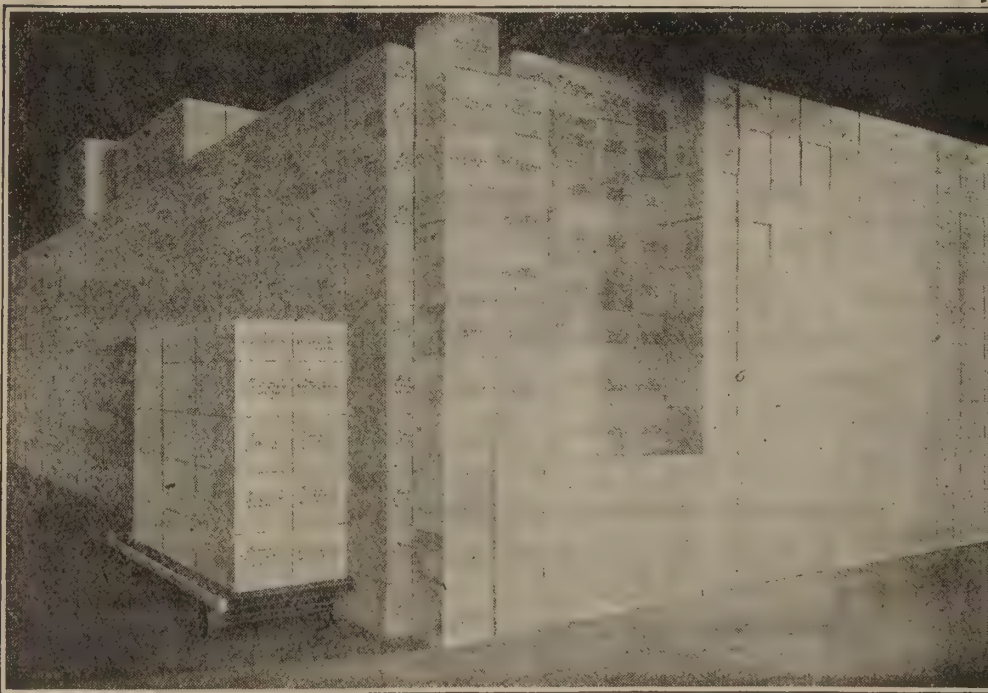
Fig. 2

Crutches.—Crutches or forks are quite useful even with a small vat, and are an absolute necessity where a large vat is used. They should have handles from 3 to 5 ft. long and the fork portion proper should be heavy enough not to bend readily or to injure the animals when applied to the back of the neck to push the head under.

Miscellaneous Information.—Never use a dipping solution that has stood so long and has deteriorated by freezing, accumulations of dirt, etc., but throw it away and prepare a fresh solution, always first cleaning the vat.

To attain success, especially in treating mange and scabies, great care must be observed. It is well to hand rub

Showing a part of the thousands of cases of our Stock Dip in storage, ready for quick shipment when the dipping season opens.



Rawleigh's Dip and Disinfectant

Live Stock and Poultry

FOR USE WITH

Used Upon Hogs, it is a remedy for Mange, Eczema, Lice, etc. and a powerful factor in the prevention of Hog Cholera and Swine Plague.

Used Upon Sheep, it is a remedy for Scab, Lice, Ticks, Foot Rot, Maggots, and also lessens the prevalence of Grub in the Head.

Used Upon Cattle, it is a remedy for Mange or Spanish Itch, a Destroyer of Lice, Wood Ticks, Ring Worm, Screw Worms, Warbles, Heel Flies and Contagious Abortion.

Used Upon Horses, it is a remedy for Mange, Lice, Ring Worm, Galls, Grease Heel, Scratches, Thrush, and Proud Flesh.

Used Upon Fowls, and in coops, pens, yards and run-ways, it is a remedy for Lice, Mites, Fleas, Canker, Leukemia, Chicken Pox, Favus, Scaly Leg or Scabies, Scab of the Body, and a Most Reliable Preventive of Cholera.

Used Upon Any Kind of an Animal, it is a Destroyer of Parasites, and a healer of Skin Diseases, Galls, Wounds, Insect Bites, and Sores of various kinds.

Give It a Trial—Prove to yourself that its use upon your horses, cattle, hogs and sheep means healthier, thrifter animals and greater profits to you. Remember that Rawleigh's Dip and Disinfectant permits a higher dilution than most other Dips, and is absolutely safe, sure and reliable. Actual chemical test has proven it to be the best Dip for the money you can buy.



Rawleigh's Dip and Disinfectant

Disinfectant, Germicide and Healer

FOR USE AS A

Does not Injure the Skin in any way. Instead it stimulates the skin, promotes the growth of wool on sheep, cleanses and glosses the coats on cattle and horses, and hastens the healing of cuts and sores.

Removes Foul, Rank and Disagreeable Odors by destroying their causes. Does not merely substitute one odor for another; it destroys odors.

It Destroys Bacteria and other disease germs in sick rooms, cellars, stables, hog pens, poultry houses and elsewhere. It is non-corrosive, non-irritating and non-poisonous when used according to directions. Does not injure fabrics or metals.

It is a Foe to Filth and Decay. It arrests putrefaction, prevents the hatching of flies, and kills bed-bugs, cock-roaches and other noxious insects.

Used About the House and elsewhere, it is a thorough disinfectant and destroyer of disagreeable odors and insects.

For Personal Use. It is a splendid antiseptic wash for burns, cuts, ivy poisoning, bee stings, insect bites, and other wounds.

Instead of Being an Expense it pays handsome profits. Every living creature on the place thrives much better and brings in much greater returns where it is used. You simply cannot afford to get along without it. It is valuable for so many purposes and it costs so little.



OVER 50 USES

FOR

Rawleigh's Dip and Disinfectant

—ON EVERY FARM—

Effective, Inexpensive, and Easy to Apply

This Preparation has the U.S. Government Approval for Official Dipping of Sheep Scab and we positively Guarantee it to be as Represented in every respect.

A HIGH GRADE, STANDARDIZED, NON-CARBOLIC PREPARATION

THAT IF USED ACCORDING TO DIRECTIONS IS NON-POISONOUS AND HARMLESS

EFFECTIVE, INEXPENSIVE AND EASY TO APPLY

all bad cases while in the solution, and they should be kept in the tank one full minute by the watch.

By dipping the smaller animals last, less dip solution is required, but because animals recognize each other largely by the sense of smell sucklings should be dipped and passed through the tank at the same time as their mothers. If separated for a considerable time they may not know each other.

Provide shade and plenty of water during hot weather, and furnish shelter from winds in cold weather, with plenty of feed. Be careful not to overdrive or roughly handle cattle and other animals that have recently been dipped. Do not dip animals when they are wet.

Dip Must Reach the Skin.—It requires more care and a greater length of time to properly dip or hand dress animals covered with long thick hair or wool than it does those that have light thin coats or those that have been recently clipped or sheared.

Dip Every Animal in the Flock or Herd, those that have been exposed as well as those showing distinct evidence of disease. Do not miss even one. This is absolutely necessary to prevent immediate reinfection. One lousy, tick-infested, mangy or scabby animal will reinfest the whole lot.

Hand Dressing

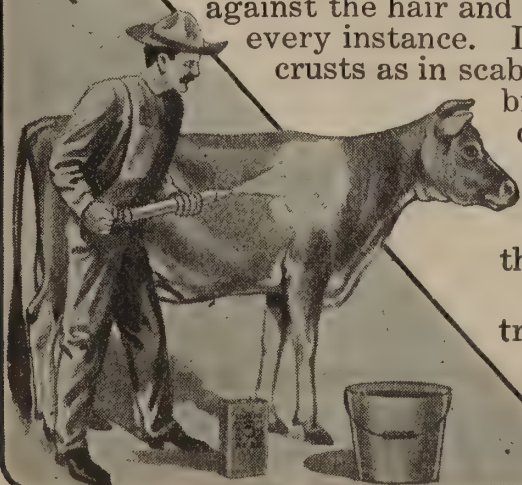
What It Is.—Hand dressing is the application of dip solution to any animal by hand; as with a hand-sprayer, sprinkler or brush.

When the Weather Is Very Cold it is not a good plan to dip any animal (pregnant ewes should never be dipped,) and in such cases hand dressing must be resorted to. Also, where large animals such as horses and cattle have to be treated it is often inconvenient to dip them, and hand dressing is useful. It must be remembered however, that hand dressing is only a substitute for dipping and where the latter is at all practicable, it is much to be preferred.

The Solution for hand dressing should be made much stronger than for dipping. Usually 1 part Rawleigh's Dip & Disinfectant to 50 parts water will be found about right.

Great Care should be taken to work the liquid against the hair and well under it down to the skin in every instance. In treating diseases where there are crusts as in scab for instance, the crusts should be broken at the time or just before the dressing is applied. Pay particular attention to the base and inside of the ears, the back, the flanks, and the inside of the legs. See that the solution reaches every part.

Second Dressing.—Repeat the treatment within ten days to kill any nits that may have hatched out since the first treatment. Be just as careful the second time as the first.



Dipping Tanks for Sheep

See Figure 1, page 12. Also read matter under heading "Dipping Tanks for Hogs," on page 24.

Swimming Vats for Sheep



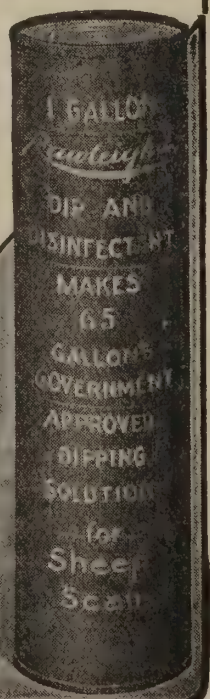
Fig. 3

Where large flocks of sheep have to be dipped, the swimming vat saves much time and labor. For dipping a thousand head or more, it should be at least 40 ft. in length and 5 ft. deep. It should be 6 inches wide across the bottom, and the sides should slope upward and outward until at the top it measures 24 inches wide, but on no account should it be any wider, because one thing to be guarded against is the turning around of the sheep in the vat. The inside should be perfectly flush so that no object will interfere with the passing through of the sheep. Sink the vat into the ground 4 ft. It should first be filled with water to see if it leaks, and after you are sure that it does not leak, it can be bailed out or drained and filled with dipping solution. There should be a collecting yard at one end of this vat and a rise and draining pen at the other. One end should be made slightly lower than the other, so that in emptying and cleaning the vat, the liquid will all run to one place and thus make the work easier.

Diseases of Sheep

Government Rules, Regulations, Fines, Etc.

Government Regulations.—"It is required of everyone intending to ship or to trail sheep to ascertain that the sheep are not affected with scabies and have not been exposed to the contagion thereof, before offering them for transportation or before crossing State or Territorial boundaries. Transportation companies are required to provide cleaned and disinfected cars or other vehicles for the reception of sheep, and to refuse for shipment, sheep whose freedom from disease and exposure to contagion is in doubt. Sheep that are not affected with scabies and that have not been exposed to contagion may be shipped or trailed without restriction, unless they are in a locality where inspection and



certification are required before their removal therefrom."

Must be Dipped in Approved Dip.— "Sheep that are affected with scabies, or that have been exposed to contagion of scabies, either through contact with infected flocks or infected premises, pens, or cars, shall not be shipped or driven from one State or Territory or the District of Columbia into another State or Territory or the District of Columbia, or into public stock yards or feeding stations unless they have been dipped in a mixture approved by this department, except as provided in Rule 4."

Rule 4.— "Sheep that are affected with the disease may be shipped for immediate slaughter after one dipping, but if they are intended for feeding or stocking purposes they shall be held for a second dipping ten days after the first one. All of the sheep in a certain flock or shipment in which the disease is present shall be considered as affected with the disease."

Fine and Imprisonment.— "Violation of this order is punishable by a fine of not less than \$100.00 nor more than \$1000.00, or by imprisonment not exceeding one year, or by both fine and imprisonment."

Scab or Scabies

This disease in all its three forms is caused by mites that lacerate and apparently poison the skin, causing terrible itching, festering, loss of wool, emaciation and death.

The Three Kinds of scab are Head Scab, Common or Body Scab, and Leg Scab. They appear chiefly upon the parts of the animal designated by their names.



Fig. 4



Fig. 5

Common Scab Mites.— Figures 4 and 5 show the upper and under side of the mite greatly enlarged. The females measure about $\frac{1}{40}$ of an inch in length and the males about $\frac{1}{50}$. It bites and lacerates the skin until scabs and crusts form, and then it forms galleries beneath the crusts and lives there.

Head Scab and Leg Scab.— These two varieties are not so important in reference to sheep as the body scab, and as they yield to practically the same remedy as body scab, we shall not consider them further.

Symptoms of Common Scab.— The first sign of scab is an intense itching evidenced by a continual desire of the sheep to rub against fences, trees, posts, its own mates, in fact, against anything and everything near it. This itching is especially noticable after the sheep have been driven and become heated. Gradually the appearance changes from that of matty and taggy wool to large bare spots of skin. Tags of wool are left upon every object against which the animal rubs itself. A great change takes place in the hide, and crusts and scabs form of various sizes and thicknesses. The skin becomes dry, furrowed, thickened, cracked and bleeding.

The ewes either abort or bear weak lambs. The disease covers an ever widening area and if not properly treated produces anemia, emaciation, exhaustion and death.

The government permits the use of Rawleigh's Stock Dip and Disinfectant in the treatment of sheep scab. The following paragraph appears upon each and every container of Rawleigh's Dip & Disinfectant:

"A sample of this Dip has been submitted to the United States Department of Agriculture. We guarantee the contents of this package to be of the same composition as the sample submitted to the department, and that when diluted according to directions printed hereon for the treatment of sheep scab, it will give a dipping fluid of the composition required of a coal-tar creosote dip by the Regulations of the Secretary of Agriculture governing sheep scab.



Fig. 6.
The beginning of common scab. Bare spots and a tagging of the wool.

'DIRECTIONS.—For the dipping of sheep for scab, dilute one part of Rawleigh's Dip & Disinfectant with 65 parts water."

Treatment.—Dipping is by far the most satisfactory treatment for all except pregnant ewes. These should be hand dressed with Rawleigh's Dip & Disinfectant, 1 part to 50 parts water according to directions given under the general heading "Hand Dressing," on page 18 of this book. When dipping animals, keep them in the tank fully one minute. Do not guess at the time but use the watch and do it right. Break all the crusts just before or at the time the sheep is going through the solution. For this purpose a curry comb or stick may be used. Push the head of each sheep under the solution once, only for an instant. Complete submersion is necessary.

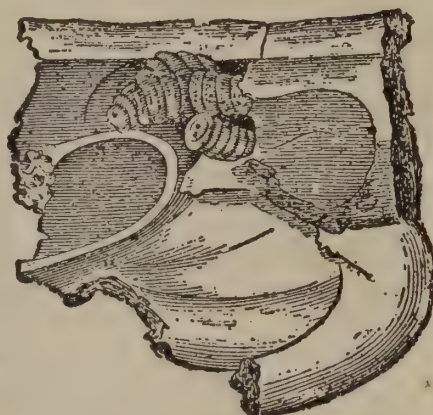


Fig. 7.
Scab considerably advanced. Wool very taggy and skin becomes bare.

After sheep have been dipped they should be put upon pasture that has not been occupied by sheep for some six or eight weeks. Dip all sheep again in ten days to kill any nits that may have hatched after the first dipping. If by chance sheep become reinfested, another dipping process must be gone through with promptly.

Disinfection Necessary.—If sheep are in sheds be sure to disinfect the sheds in every part by thoroughly spraying with a solution of 1 part Rawleigh's Dip and Disinfectant to 100 parts water; or the solution that is left after dipping the animals may be used for this purpose.

GRUB IN THE HEAD.—Sheep grub are larvae of the Estrus, a fly very similar to the bot fly that bothers horses. These grubs are often found in the hollow cavities in the front portion of the sheep's head.



The above illustration shows the estrus, its eggs, and a portion of a sheep's skull, showing the grubs in the head. These flies harbor in the cracks of the sheep sheds and in the straw beds during the winter months, and then come out during the warm spring days and attack the sheep as they are grazing in the pastures. They lay their eggs upon the sheep's nose, and the grubs upon hatching crawl inside.

Treatment.—A surgical operation whereby the grubs are removed bodily is the only measure which can be *relied* upon to effect a cure, because the grubs are very tough and usually resist any fumigation process that is not strong enough to kill the sheep themselves.

Prevention.—However, a great deal can be done in the way of prevention by frequent sprinkling of the bedding upon which the sheep lie down to rest at night, using for this purpose a solution of one part Rawleigh's Dip and Disinfectant to 100 parts water. In order to be sure that every part of the sheds, etc., is disinfected, it is often well to make up a combination dip whitewash according to directions on our labels, sprinkling it about. This solution shows white wherever it is sprinkled.

Lice.—Sheep lice are mostly white on the body, reddish brown on the head, about $\frac{1}{25}$ of an inch long, after the appearance shown by Figure 8. Lice cause sheep a great deal of annoyance, produce intense itching, harden and dry the skin and cause it to become covered with blackish scabs. The animals constantly rub themselves, spoil the fleece and present an unthrifty appearance. If sheep are examined in the bright sunlight, there should be no difficulty in discovering the lice upon them.



Fig. 8



Treatment.—Dip the sheep in a solution of 1 part Rawleigh's Dip & Disinfectant to 77 parts water. Disinfect sheds, pens, etc. thoroughly with a solution of 1 part Rawleigh's Dip & Disinfectant to 100 parts water; or the solution left in the tank after dipping the sheep may be used

for this purpose. Dip again in ten days.

FOOT ROT.—Trim the hoof and bind it with a strong cloth saturated with a solution of 1 part Rawleigh's Dip and Disinfectant to 25 parts water. After allowing this to remain upon the foot for a day or so, apply a thin paste of flowers of sulphur and the full strength Dip. If the feet are in very bad condition it will be necessary to care for them a considerable time.

MAGGOTS.—These are grubs hatched from eggs deposited by flies upon sores or damp filthy places in the wool. Clip the wool and wash the spot with a solution of 1 part Rawleigh's Dip & Disinfectant to 15 parts water every five days until cured.

TICKS.—The tick is another parasite that greatly annoys sheep and though its ravages are not as great as scab, it is the cause of considerable loss. Sheep ticks are usually grayish brown in color and about $1\frac{1}{4}$ inch long.



Fig. 9
Enlarged view
of the Sheep
Tick.

Symptoms.—The itching and irritation set up by ticks produce symptoms similar to those of scab. If sheep show a considerable restlessness and a desire to be rubbed or scratched, it is well to examine them. The extent of damage caused by ticks depends, of course, upon their number. If left alone they multiply so rapidly as to become a positive danger, especially to lambs.

Treatment.—Dip in a solution of 1 part Rawleigh's Dip & Disinfectant to 77 parts water. Any animals that might be injured by dipping such as pregnant ewes should be hand dressed. Either dip or hand dress the entire flock again within about three weeks, to kill any nits that may have hatched out after the first treatment.

Disinfecting.—If the sheep are in the sheds, be sure to disinfect the sheds in every part by spraying with a solution of 1 part Rawleigh's Dip & Disinfectant to 100 parts water; or the solution left in the tank after dipping the animals may be used for this purpose.

Diseases of Hogs

Hogs suffer as much from insect pests as any of our domestic animals, and particularly from lice. That it is best to dip hogs frequently, especially during the summer months, goes without saying. Very few hogs are free of lice, and as these vermin are blood-suckers they keep the hog in such a weak, debilitated state that he is susceptible to serious diseases, and especially prone to virulent attacks of Hog Cholera. It has been demonstrated time and again that if hogs are kept free of lice and Cholera becomes prevalent in a neighborhood, that the loss is a great deal less than if they are not. It is a proven fact that hogs grow faster, fatten quicker and do better in every way, if they are dipped frequently in a solution of Rawleigh's Dip and Disinfectant.



Dipping Tank For Hogs

Dipping tanks for hogs are made in various shapes and of different materials, such as wood, sheet metal, cement, etc.

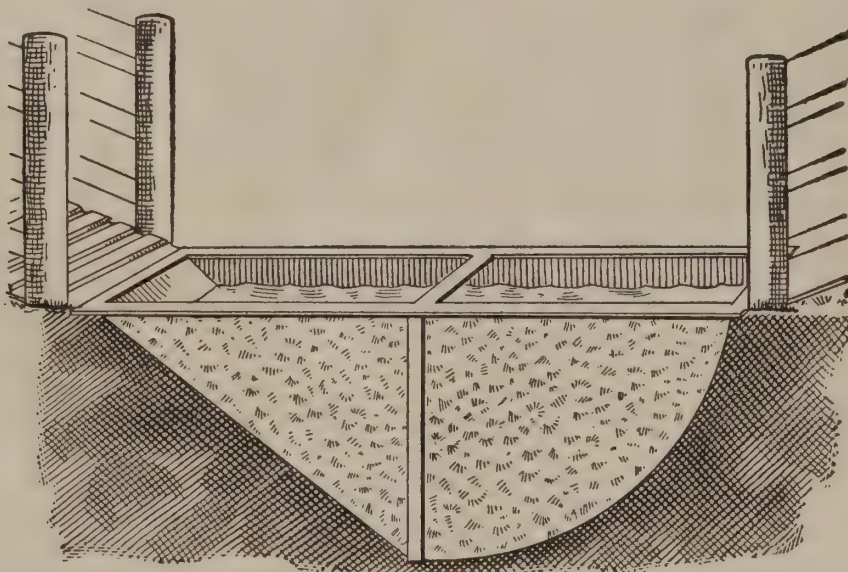


Fig. 11

Fig. 11 illustrates one of the best shapes for a dipping tank. Manufacturers of such tanks claim that an animal could not drown in them, because the round back of the tank prevents it. This sort of tank also requires less dip than a tank of the same dimensions having a square back. Such tanks are made in two general sizes; one is for hogs, sheep and cattle, 10 ft. long, 4 ft. deep, 20 inches wide at top, 15 inches wide at bottom, holds 230 gallons. The other size is about 8 ft. long, 3 ft. deep, 20 inches wide at top, 15 inches at bottom, holds 125 gallons and is used for small hogs and sheep.

What an Unprejudiced Observer Says

"Get a dipping tank; dip your hogs once a month whether they are lousy or not. It will pay quite as well as any work you are likely to do on the farm this season."—*Henry Wallace, Wallace's Farmer, Des Moines, Iowa.*

MANGE.—This disease is caused by a mite, much the same as mange in horses and cattle, and scab in sheep are caused. The symptoms are intense itching, blisters and crusts on the skin, falling of the hair, wrinkled skin and a generally weakened condition.

Treatment.—Dip the hogs in a solution of 1 part Rawleigh's Dip and Disinfectant to 50 parts water, or hand dress them with a solution of the same strength. Repeat the operation in 10 days to kill any eggs that may have hatched after the first dipping. After the hogs are dry, apply flowers of sulphur and Rawleigh's Antiseptic Healing Salve in equal parts mixed with sufficient Rawleigh's Dip and Disinfectant to form a thin paste.

ECZEMA.—The Symptoms are severe itching, reddened skin, slight fever, poor appetite and dullness. The disease generally

HAS OVER 50 USES ON EVERY FARM

appears on hogs occupying filthy pens, receiving insufficient food, being exposed to extreme weather, etc.

Treatment.—Dip in a solution of 1 part Rawleigh's Dip and Disinfectant to 77 parts water. After the hogs are dry it is well to rub them with the salve mixture mentioned for mange. Then place them in clean dry quarters, and improve their feeding conditions if necessary.

LICE.—Hogs are more frequently infested by lice than is generally supposed. It is well to examine them once in a while, and if lice are found upon them, dip them in a solution of 1 part Rawleigh's Dip and Disinfectant to 77 parts water.

Pens and Sheds should always be thoroughly disinfected with a solution of 1 part Rawleigh's Dip and Disinfectant to 100 parts water, or the dipping solution left in the tank after dipping hogs may be used for this purpose. When hogs are kept free of lice they grow faster, fatten quicker and resist contagious diseases better



Hog Louse and Eggs

Plan For Dipping Hogs

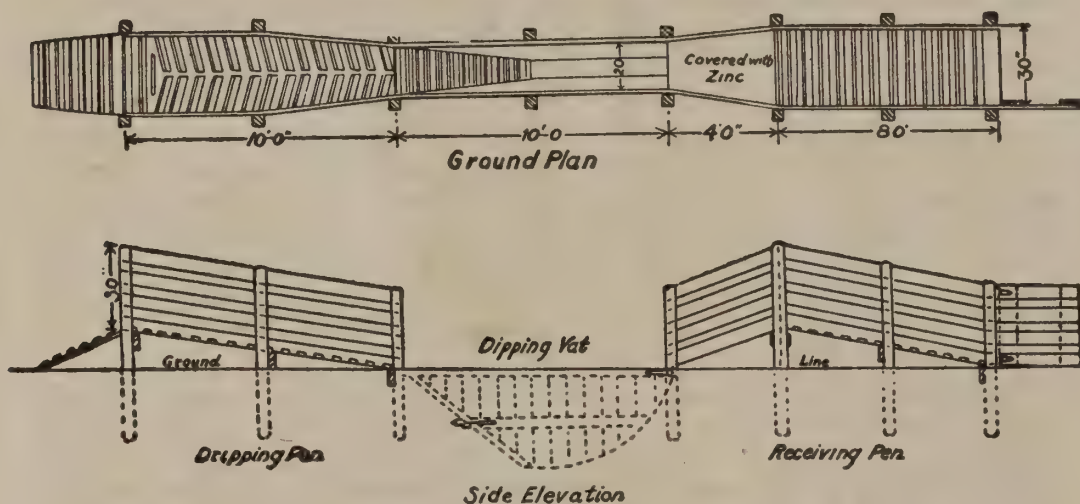


Fig. 12

Fig. 12 is a ground plan and side elevation of chute, dipping tank, etc., for hogs. It is almost self-explanatory. Hogs are collected in proper pen or yard at the receiving end of the chute and are driven forward singly to the tank. When they get upon the sloping zinc platform just in front of the tank, they slide forward in spite of themselves into the dip. In case the zinc is not quite slippery enough, a little dipping solution out of the tank may be thrown upon it to make it more slippery. It is well to have a swinging gate hung just in front of the tank and at the bottom of the zinc covered platform, so that the hogs cannot jump too far out into the tank when entering.

Hog Cholera and Swine Plague

As most every hog raiser knows from experience these two diseases are terribly destructive. Although isolated cases may be cured now and then, in the great majority of cases it has been impossible to cure cholera.

Symptoms of Cholera.—Upon the first appearance of this disease in the neighborhood the hogs usually die suddenly, often before or just about the time when they are first noticed as being sick. In many cases, however, and especially after the disease had existed in the neighborhood for some time, the progress of the malady is slow. First there are fever, shivering, unwillingness to move, loss of appetite and the animals are dull, stupid and inclined to hide away in litter or bedding. Sometimes the bowels are normal, sometimes constipated; but generally there is an offensive diarrhea, which is abundant, exhausting and persistent. At first the eyes are congested and watery, but later a yellowish secretion accumulates in the angles and gums the lids together. Breathing is usually rapid, oppressed and labored. There is an occasional cough, especially when the animals are moved from their bed. Color of skin varies from a pinkish red to a dark red or purple. There is a rapid loss of flesh, the animals grow weak, stand with back arched and abdomen drawn up. They walk with a tottering, uncertain gait, there is less and less inclination or ability to move and the weakness and exhaustion increase until death.

The Symptoms of Swine Plague.—The external symptoms of swine plague or those which the average man is capable of observing are practically the same as those for hog cholera.

Treatment.—No treatment has yet proven altogether reliable for either of these diseases. Rawleigh's All-Medicine Hog Mixture, however, has saved many hogs, seemingly having every symptom of Cholera, and its use, together with the necessary precaution concerning housing, feeding, etc., we believe will be found to ward off attacks of cholera. Ask the Rawleigh Man or write the Company.

Prevention Most Important.—Since these diseases are practically incurable, the most sensible and economical course is to prevent them as far as possible. This can be done in most instances by keeping the hog's general health in good condition, keeping him free of lice and other parasites, keeping the pens, troughs and feed yards thoroughly disinfected and supplying him with an abundance of the right kind of food, occasionally containing Rawleigh's All-Medicine Hog Mixture as directed.

Disinfection.—Thorough disinfection should be combined with ventilation and sunlight, though it is not well to keep the animals exposed to the direct rays of the sun. To disinfect pens, sheds, yard, feeding troughs and the animals themselves, make up a solution of 1 part Rawleigh's Dip and Disinfectant to 100 parts water, and frequently spray it all about. If cholera is actually in the neighborhood, these precautions are especially necessary, and dipping the animals every week or ten days in a solution of 1 part Rawleigh's Dip and Disinfectant to 77 parts water should be resorted to.

A Disinfecting Wallow has many advantages, and is made by



HAS OVER 50 USES ON EVERY FARM

hollowing out an excavation in the ground and either setting a water-tight box in it or lining it with cement. Such a wallow may be all the way from 10 to 20 feet across, according to the number of hogs, and should be 8 to 12 inches deep. After making such a wallow, fill it with water and be sure it does not leak. When you find it holds water add a proper proportion of Rawleigh's Dip and Disinfectant. A wallow as described above and 10 feet across would require about a quart of Rawleigh's Dip and Disinfectant, and one 20 feet across would require about a gallon.

Have the wallow set practically on a level with the ground and allow the hogs to run in it all they will. They will thoroughly enjoy it, especially in hot weather, will keep themselves free of lice and skin diseases, and will thrive much better than hogs raised under ordinary circumstances. Clean the wallow out occasionally and renew both water and dip.

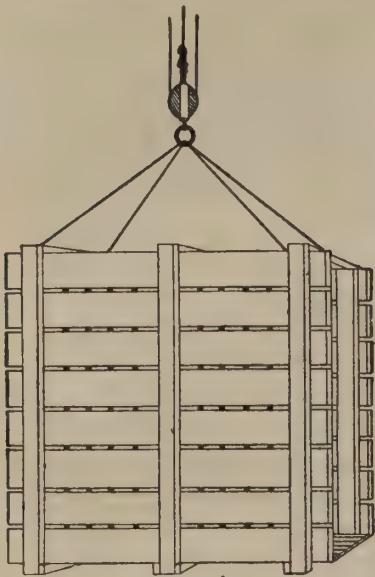


Fig. 12

them here. Description of a small plant follows:

The Small Dipping Plant

A plant of the capacity shown by these illustrations, answers very well in a community where various owners have bunches of cattle ranging from 80 to 100 head or less, and it may be used with equal advantage for horses.

Among its chief advantages over the large plant or swimming vat are its cheapness of construction and proportionately smaller expense for operation. The dip in the tank can also be kept at the necessary temperature with greater ease, because of its lesser volume; and the submersion of the animals as well as the length of time that it is

CONTAGIOUS ABORTION.—For symptoms and treatment see same heading under diseases of cattle.

Dipping Plants for Cattle and Horses

Plants for dipping large animals, such as cattle and horses necessarily differ some from those used for sheep and hogs. They are large, small, or medium-sized—according to circumstances and requirements. So few of our customers, however, are likely to need what are known as large and medium-sized plants that we shall not describe

Fig. 13



EFFECTIVE, INEXPENSIVE, AND EASY TO APPLY

desired to keep them in the dip, can be more accurately controlled.

Even in communities where mange does not exist, and where numbers of small herds become infested by lice (as they always do) a plant such as this can be constructed and operated by the farmers and stockmen with a great deal of profit.

Sliding or roller gates are used at the ends of the alley or chute leading to and from the cage. This is better than having the gates on hinges at either end of the cage. Barn door rollers may be used. The rope from the hoist works over a drum with a brake, and may be drawn by horses or a stationary engine, and thus the cage can be lowered and raised by the same man who operates the gate at the end of the chute leading into the cage.



Fig. 14

Diseases of Cattle

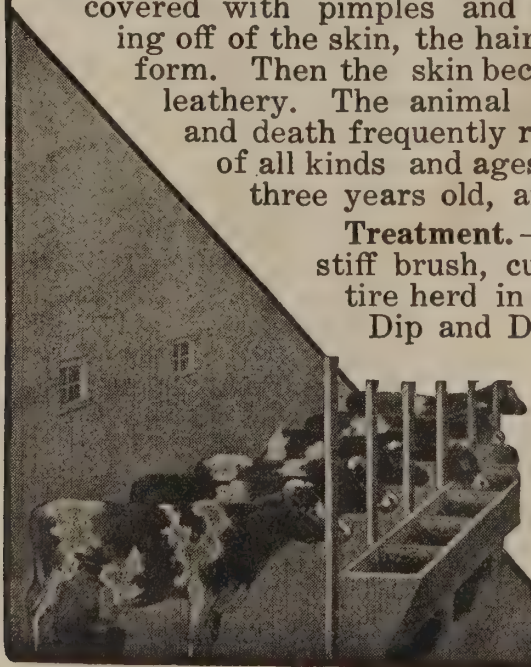
See "General Dipping Instructions" on page 11, also "Hand Dressing, page 18

MANGE, SCAB OR SPANISH ITCH.—Scab in cattle is mostly of two kinds—Common Mange and Tail Mange. It is usually most noticeable in the winter when the animals live at a disadvantage as to cold, feed, etc. It is very contagious and caused by parasitic mites. They live upon the surface of the skin and beneath the crusts or scabs produced by their biting.

Symptoms.—The first symptom of the disease is an intense itching and the animal seeks to rub itself against trees, fences, posts, rocks, etc. As the disease spreads, the animal becomes covered with pimples and scabs. There is an abundant scaling off of the skin, the hair falls out and gray-brownish crusts form. Then the skin becomes thickened, stiff, wrinkled, and leathery. The animal becomes poor, weak, and scrawny and death frequently results. This disease affects cattle of all kinds and ages, but more especially those under three years old, and older ones that are not thrifty.

Treatment.—Break open all the scabs with a stiff brush, curry comb, or stick, and dip the entire herd in a solution of one part Rawleigh's Dip and Disinfectant to 77 parts warm soft water, allowing each animal to remain in the dip one minute by the watch. Hand dressing may be done if the weather is very cold or if dipping facilities are not available.

Clean, Sanitary Stables Insures Better
Health to the Animals and Bigger
Profits to the Owner.



Thoroughly Disinfect every part of the stalls, sheds, fences, lots, posts, etc., where the animals are kept. Even the feeding racks, mangers, bedding and any pails that have been used about the animals should be thoroughly disinfected. If this is not done, reinfection will surely occur. Disinfection should be done by sprinkling or spraying with a solution of 1 part Rawleigh's Dip and Disinfectant to 100 parts water.

LICE.—Lice often produce conditions in cattle similar to mange, and are always a source of annoyance to the animals and loss to the owners. Cattle lice are of various sizes, shapes and colors, and are especially common upon calves and young cattle in the spring and fall. Unless the animals are relieved of them, lice interfere with growth, the giving of milk, and the laying on of fat.

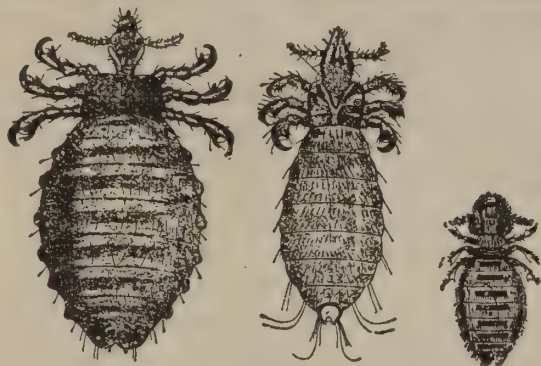


Fig. 15

Treatment.—Dip or hand dress the same as for Mange or Scab, repeat the operation in about ten days and *disinfect* entire premises thoroughly.

RING WORM.—This is caused by a vegetable parasite and is contagious not only to cattle, but to men as well. It is distinguished by reddish circular patches. The hair on the patches is erect at first, but later it disappears from them altogether. Crusts form and the patches continue to grow into larger and larger circles. The disease locates itself most frequently upon the lips, about the eyes, on the head, neck, and upper parts of the body.

Treatment.—Dip the animals in a solution of 1 part Rawleigh's Dip and Disinfectant to 77 parts water, allowing them to remain in the dip one minute. Hand dressing may be done if the weather is extremely cold or if dipping facilities are not available. Whichever plan is pursued, repeat the operation every 5 days until the disease is cured. **Thoroughly disinfect** as for Scab or Mange.

SCREW WORMS.—These are hatched from eggs deposited by various kinds of flies upon sores, cuts, and wet, filthy parts of the skin. As soon as they are hatched they bore into the flesh and cause endless suffering. Wash the wounds thoroughly with a solution of 1 part Rawleigh's Dip and Disinfectant to 10 parts water. This will kill the worms and prevent flies from attacking the wound again. Repeat every two or three days until cured.

WHITE CHOLERA OR CALF SCOURS.—Drench the calf once a day with a pint of luke warm water or milk containing two teaspoonfuls of Rawleigh's Dip and Disinfectant. Two or three doses are usually sufficient, and often one dose effects a cure. If your stock is valuable it pays to give the cow, just before calving, plenty of fresh, clean bedding in a separate stall, everything being thoroughly disinfected by sprinkling with a solution of one part Rawleigh's Dip and Disinfectant to 100 parts water. As soon as the calf is born wash the navel with this same disinfecting solution and pass a clean white bandage around the body covering the navel

with this, and then keep bandage immediately over the navel wet with this disinfecting solution. See that the mother has clean, disinfected bedding all the while, so that the udder may be kept clean.

Keep everything out of which the calf is fed thoroughly clean, if it is fed by hand. Rinsing out feeding troughs, pails, etc., with Rawleigh's Dip and Disinfectant solution is an economical means of preventing a good many internal ailments which are common in calves.

GALLS, SORES, WOUNDS, ETC.—Apply a solution of one part Rawleigh's Dip and Disinfectant to 77 parts water frequently until healed. Or, better still, use Rawleigh's Healing Powder.

FLIES AND MOSQUITOES are often the bane of cattle, not only milch cows, but growing and fattening cattle as well. The fact is most noticeable perhaps in the case of the milch cow, because we easily see a decrease in the quantity of milk given, but a little thought will convince any one that the same annoyances which produce loss of milk, will also hinder growth and fat production.

To Keep Flies and Mosquitoes Away.—Spray the animals daily or as often as needed with a solution of 1 part Rawleigh's Dip and Disinfectant to 100 parts water, applying the solution *against the hair* so it will work readily down to the hide and not run off as soon as it is put on.

Rawleigh's Fly Chaser.—A preparation prepared expressly for driving away flies, mosquitoes, gnats, etc., may be used. It is easily applied with a sprayer, and is very economical to use, very little being necessary to keep the pests away from animals.

WARBLES OR GRUBS.—These are hatched from the eggs of a fly, known as the Estrus. This fly is very much like the fly that infects horses with bots and sheep with grub in the head. In addition to irritating the cattle and lowering their vitality, these grubs perforate the hides. Grubby hides bring about 1c per pound less in the market than do whole hides; also grubby cattle bring about 15c to 20c less per hundred in the packing markets than cattle free from grubs.

Treatment.—Dipping in Rawleigh's Dip and Disinfectant solution as for Scabies, meanwhile rubbing the back thoroughly with a stiff brush is effective; or hand dress the animal's back with a solution of 1 part Rawleigh's Dip and Disinfectant to 30 parts water, rubbing the solution in well.

Prevention.—Prevention is better than cure when it comes to grubs as even if the grubs are removed, the holes often remain in the hide. The solution mentioned under the heading "To Keep Flies and Mosquitoes Away" if applied to the backs of animals frequently during warm weather will protect them against grubs.

HEEL FLIES.—These are the same flies as those which lay the eggs under the skin on the back and produce grubs. Apply to the heels the solution used to keep flies away.

Contagious Abortion

This most destructive of all cattle diseases is caused by a bacterium or germ transmitted from males to females and vice versa

at service. To avoid it deny service to herds known to be affected with it. If it gets into the herd, only the most thorough and continual disinfection will ever get rid of it. Also all males should have sheath and belly washed with 1 part Rawleigh's Dip & Disinfectant to 100 parts water before and after service and cows should be doused with same strength of solution.

Combating Poultry Diseases

Cleanliness and Disinfection.—It is difficult to over-estimate the value of cleanliness and disinfection in the poultry house and yard. It is not exactly the same kind of cleanliness that should prevail in the kitchen but it should include the removal of all offal frequently, scalding and washing drinking fountains, spading of yards occasionally, providing sufficient drainage, ventilation and sunlight and frequent disinfection of the entire premises. In every coop there should be a liberal-sized dust box, into which a generous amount of Rawleigh's Louse & Insect Killer has been thoroughly mixed. This is the hen's toilet and in it she is able to kill many of her insect enemies.

What the Agricultural Epitomist Says:

"Greater regard for cleanliness is demanded in warm and damp weather than at any other time, but cleanliness ought *never* to be neglected in *any* season. Do not let the houses and yards become filthy and foul-smelling simply because there is warm weather. Nearly all poultry diseases are caused by drafts, dampness, improper feeding or lack of cleanliness. Neglect or carelessness is at the bottom of it all. Remember that it is easier to guard against disease than to cure it."

Disinfection Is Important, because it purifies the air, destroys contagious disease germs and kills lice, ticks, mites, etc. If at any time the chickens are found infested with lice, treat as advised under the heading "Lice, Mites, Fleas and Ticks" in Rawleigh's Poultry Book. Always keep houses and yards pure, sweet and clean by plenty of sunlight and ventilation and a liberal use of Rawleigh's Dip and Disinfectant. Use 3 table-spoonfuls to each gallon of water as a spray. **If the weather is cold and damp**, disinfect with slacked lime, to each half bushel of which a can of Rawleigh's Louse and Insect Killer has been added.

But Little Sickness can exist among fowls where the premises are regularly disinfected as above, and where Rawleigh's Poultry Powder is fed according to directions.

In the Spring Especially, and during the summer at regular intervals, the chicken houses, feeding troughs, nests, and every part of the premises should be

**For Disinfecting Poultry Houses and
Destroying Lice and Other Vermin
Rawleigh's Dip Is Unexcelled**



thoroughly overhauled, cleaned and disinfected. It is during the warm months particularly that lice mites, fleas, ticks, etc., multiply amazingly. Spring cleaning prevents the hatching of millions of these pests.

For more details regarding Poultry Diseases, see Rawleigh's Poultry Book.

Diseases of the Horse

See "General Dipping Instructions," page 11, also "Hand Dressing," page 18.

Mange, Lice, Ring Worm and other diseases that are similar in horses and cattle should receive the same treatment in horses as



Fig. 16

in cattle. In the horse, however, the Sarcoptic mange is much more frequent than in cattle and as this disease is deep seated, it requires more thorough treatment than common mange. *This disease is transmissible from horses to men.* If it does not yield readily to the treatment suggested for mange in cattle, hand dress the horse

about once a week with a solution of 1 part Rawleigh's Dip & Disinfectant to 30 parts warm soft water. Three such treatments should ordinarily effect a cure but as this disease is very stubborn additional dressings may be necessary,

Thorough Disinfection.—Here as in all parasitic diseases the most thorough disinfecting must be done. The entire premises should be sprinkled or sprayed with a solution of 1 part Rawleigh's Dip & Disinfectant to 100 parts water and great care should be exercised to see that nothing escapes this disinfection.

The Lice shown here are the two most common to the horse. The larger one, commonly called the Western Horse Louse, is harder to kill than is the ordinary louse. For its destruction a dipping solution of 1 part Rawleigh's Dip & Disinfectant to 65 parts water should be used, or a hand dressing of 1 part Rawleigh's Dip & Disinfectant to 30 parts water may be applied.



Fig. 17

Galls, Grease Heel, Scratches, Etc.—Wash with a solution of 1 part Rawleigh's Dip & Disinfectant to 50 parts water. Do this at frequent intervals until the trouble is eradicated.

Thrush and Proud Flesh.—Rawleigh's Dip & Disinfectant is a mild caustic and should be applied to the parts full strength.

Diseases of Dogs

Every man that has a dog upon his place should keep him free of parasites for the sake of the family and the live stock with whom the dog so intimately associates.

Fleas, Ticks, Etc.—Many of the parasites harbored by the dog also live upon other animals and some attack man. Therefore we advise that the dogs are dipped as well as sheep, hogs, etc.

Mange, Ring Worm, Favus, etc., in dogs yield readily to the dip treatment, if thoroughly done. The sarcoptic variety of mange is the hardest to cure, but persistent dipping will do it. It is well to rub the dog with a brush while in the dip. Use 1 part Rawleigh's Dip & Disinfectant to 65 parts water.

Endorsed by Stockraisers and Farmers Everywhere

Note Carefully These Testimonials From Men Who Have Given
Rawleigh's Dip & Disinfectant a Thorough Test and Tell
in Their Own Words the Actual Results Obtained

Hogs Were Lousy and Scurvy, Made No Gains

"I had a bunch of pigs that did not eat well, were lousy and scurvy, and were making no gains. When your salesman came along and suggested that I needed **Rawleigh's Dip & Disinfectant**, I told him I never used anything of that kind and didn't know as I needed it. He left a can with me on trial, and after reading the directions, I followed them. A short time after that my pigs began to eat right, and their skins became clean, smooth and healthy. They did not rub and scratch as before. They are in fine condition now, and are growing fast.

"I am sure I would have lost them had it not been for your **Dip & Disinfectant**. It has paid back its cost to me many times over in benefit to my hogs alone. I find many other uses for it around the house and barn."

Yours truly,
(Signed)

WASHINGTON POST,
Constantine, Mich.

Horses Suffered With Mange, Rawleigh's Dip & Disinfectant Cures Them

Four of my horses were badly afflicted with Mange. I tried various remedies, but none of them did any good until I tried **Rawleigh's Stock Dip & Disinfectant**. I gave it a thorough trial, and cannot say too much in praise of your Dip.

Yours truly

A. J. BRIGHAM, Antigo, Wis.

Sure Death To Ticks on Sheep

Last spring I purchased five gallons of your **Dip & Disinfectant** which I used according to directions, and my sheep have been free from ticks ever since. The Dip destroys all kinds of vermin when used according to directions.

Yours truly,

ANDREW O. LIEN, Haug, Minn.

Superior For Curing Skin Diseases of Cattle

During the wet spell of weather last May, about a dozen of my cattle were afflicted with scurvy. I tried about six different remedies, but none gave good results. Finally I tried **Rawleigh's Dip & Disinfectant**, and its effect was satisfactory.

Yours truly

DAVID ARCHIBALD,
Lake Nebagamon, Wis.

Best of all in the Hen House

"The Rawleigh Man,—When you come our way again bring some of that **Dip & Disinfectant**. It certainly is the best thing for mites in hen-houses we ever tried." Yours truly,

J. L. PITCHER, Spencer, Ia.

Kills Lice on Poultry in Every Case

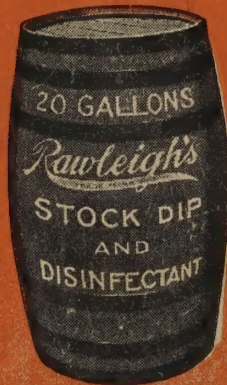
"I was troubled with lice on my poultry. I bought one half-gallon of your **Dip & Disinfectant**, and dipped 40 hens. It is the best I ever used, and I recommend it to all poultry raisers." Yours truly

J. L. SULT, Columbus, Ind.

 **Rawleigh's Dip & Disinfectant is turning Loss into Profit for hundreds of thousands of farmers throughout the United States. It will do the same for you.**

RAWLEIGH'S STOCK DIP AND DISINFECTANT

Recognized by U. S. Government for
Official Dipping of Sheep Scab



INEXPENSIVE, EFFECTIVE
AND EASILY APPLIED



Salesman Stamp Name and Address Here

L. C. Hollenbach
The Rawleigh Man
Chatfield, Minn.